

Appl. No. 09/940,378
Resp. dated May 17, 2006
Reply to Office Action of February 22, 2006

The Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims

1-104. (Cancelled)

105. (Previously Presented) A method of treating an abnormal cardiac rhythm comprising pacing the patient's heartbeat by:

providing a pair of electrodes disposed internal to a patient and exclusive of the patient's heart;

sensing an event in the patient's cardiac rhythm;

transferring energy from an energy source to an energy storage system;

discharging energy from the energy storage system using the electrode pair; and

determining whether the patient has an abnormally slow heartbeat, wherein the step of sensing an event in the patient's cardiac rhythm provides information for determining whether the patient has an abnormally slow heartbeat; wherein the electrode pair includes a first electrode disposed on a stimulus device housing the energy source and the energy storage system, and a second electrode disposed on a lead electrode assembly coupled to the stimulus device.

106-108. (Cancelled).

109. (Previously Presented) A method of treating an abnormal cardiac rhythm comprising pacing the patient's heartbeat by:

providing a pair of electrodes disposed internal to a patient and exclusive of the patient's heart;

sensing an event in the patient's cardiac rhythm;

transferring energy from an energy source to an energy storage system;

discharging energy from the energy storage system using the electrode pair; and

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determining whether the patient has an abnormally slow heartbeat, wherein the step of sensing an event in the patient's cardiac rhythm provides information for determining whether the patient has an abnormally slow heartbeat;

providing an implantable stimulus device implanted in the patient, the implantable stimulus device housing the energy source and the energy storage system and being coupled to a lead system including at least one electrode of the electrode pair;

wherein the step of providing an implantable stimulus device includes implanting the stimulus device along the left anterior axillary line of the patient.

110. (Previously Presented) The method of claim 109, wherein the step of providing an implantable stimulus device includes implanting the stimulus device at a location between the patient's third and twelfth ribs.

111. (Previously Presented) A method of treating an abnormal cardiac rhythm comprising pacing the patient's heartbeat by:

providing a pair of electrodes disposed internal to a patient and exclusive of the patient's heart;

sensing an event in the patient's cardiac rhythm;

transferring energy from an energy source to an energy storage system;

discharging energy from the energy storage system using the electrode pair; and

determining whether the patient has an abnormally slow heartbeat, wherein the step of sensing an event in the patient's cardiac rhythm provides information for determining whether the patient has an abnormally slow heartbeat;

providing an implantable stimulus device implanted in the patient, the implantable stimulus device housing the energy source and the energy storage system and being coupled to a lead system including at least one electrode of the electrode pair;

wherein the step of providing an implantable stimulus device includes implanting the stimulus device along the inframammary crease of the patient.

112. (Previously Presented) A method of treating an abnormal cardiac rhythm comprising pacing the patient's heartbeat by:

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providing a pair of electrodes disposed internal to a patient and exclusive of the patient's heart;

sensing an event in the patient's cardiac rhythm;

transferring energy from an energy source to an energy storage system;

discharging energy from the energy storage system using the electrode pair; and

determining whether the patient has an abnormally slow heartbeat, wherein the step of sensing an event in the patient's cardiac rhythm provides information for determining whether the patient has an abnormally slow heartbeat;

providing an implantable stimulus device implanted in the patient, the implantable stimulus device housing the energy source and the energy storage system and being coupled to a lead system including at least one electrode of the electrode pair;

wherein the step of providing an implantable stimulus device includes implanting the stimulus device at approximately the level of the cardiac apex.

113-115. (Cancelled).

116. (Previously Presented) The method of claim 105, wherein the step of providing a pair of electrodes includes providing the pair of electrodes outside of the patient's vasculature.

117. (Previously Presented) A method of pacing a patient through a bradycardia event comprising:

providing a pair of stimulus electrodes exclusive of the patient's heart;

providing an implantable stimulus device at a subcutaneous location, the implantable stimulus device housing an energy source and an energy storage device and being coupled to a lead system including at least one electrode of the electrode pair;

determining whether the patient has an abnormally slow heartbeat by sensing events in the patient's cardiac rhythm;

transferring energy from an energy source to an energy storage device; and

discharging energy from the energy storage device using the stimulus electrodes; wherein one of the stimulus electrodes is disposed on the implantable stimulus device.

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118. (Previously Presented) The method of claim 117, wherein the step of determining whether the patient has an abnormally slow heartbeat includes using two sensing electrodes both disposed exclusive of the patient's heart.

119. (Previously Presented) The method of claim 118, wherein at least one of the sensing electrodes is not one of the stimulus electrodes.

120. (Cancelled).

121. (Previously Presented) A method of treating bradycardia comprising providing electrical pacing stimulus between two implanted electrodes disposed exclusive of the heart wherein one of the electrodes is disposed on a canister for an implantable stimulus providing device, and the other of the two implanted electrodes is disposed on a lead electrode assembly coupled to the canister.

122. (Previously Presented) The method of claim 121, wherein the two electrodes disposed exclusive of the heart are also disposed outside of the patient's vasculature.

123. (Cancelled).